

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Michael D. Zoeckler)	Examiner: Harmon, C.R.
)	
Serial No.: 09/818,023)	Art Unit: 3721
)	
Filed: March 27, 2001)	Attorney Docket No.: 7137 CIP1
)	(R029 1057)
For: PAPERBOARD CARTONS WITH)	
LAMINATED REINFORCING RIBBONS)	
AND TRANSITIONED SCORES AND)	
METHOD OF MAKING SAME)	
)	
Appeal No.: 2007-0008		

REQUEST FOR REHEARING

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

On May 30, 2007, the Board of Patent Appeals and Interferences issued a decision in the above-identified Appeal, including therein under 37 CFR 41.50(b) new grounds of rejection of appealed claims 1 to 15. Pursuant to 37 CFR 41.50(b)(2), Appellant respectfully requests rehearing with respect to the new grounds of rejection.

The new grounds of rejection, all under 35 U.S.C. § 103(a), are as follows:

- (1) Claims 1 to 4, unpatentable over Campbell (Pat. No. 1,600,396) in view of Appellant's admission and Seufert '916 (Pat. No. 4,773,916).
- (2) Claims 5 to 7 and 11, unpatentable over Campbell in view of Appellant's admission, Seufert '916, and Seufert '206 (Pat. No. 4,064,206).
- (3) Claims 8 to 10 and 12 to 15, unpatentable over Campbell, Appellant's admission, Seufert '916, Seufert '206, and Haddock (Pat. No. 3,735,674).

The above-noted “Appellant’s admission” referred to by the Board is the statement in the specification at page 36, lines 24 to 26, that:

As is known by those of skill in the art, fold lines in thinner material must be narrower than fold lines in thicker material.

37 CFR 41.50(b)(2) requires that the request for rehearing “must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought”. Appellant believes that such points and other grounds will be apparent from the discussion that follows.

Discussion

(1) Claims 1 to 4

Campbell discloses a method of making carton blanks from a web of board consisting of, *inter alia*, plies of paper cemented together. Reinforcing tapes 8, made of fabric or the like (p. 1, line 49), are cemented to the board and then score lines 9 are formed along the tapes 8 and transversely thereto, as shown in Figs. 1 and 4 (p. 2, lines 28 to 53). The score lines are formed by rolls (p. 2, lines 10 to 14). Campbell states that an “essential feature” or “important feature” of the invention is that the scoring and cutting is done before the cement dries, so that the tapes and paper plies are free to slip relative to each other when scored (p. 1, lines 81 to 86; p. 2, lines 23 to 27). According to Campbell, it is necessary to score the paper and tape before the adhesive has dried, otherwise their relative movement “breaks the adhesion and permits separation of the plies and of the tape therefrom” (p. 2, lines 56 to 63).

At page 10 of its decision the Board found that in view of Appellant’s admission, *supra*:

a person of ordinary skill in the art at the time of Appellant’s invention would have appreciated that the score lines extending across the lines of reinforcement of Campbell’s carton blank should be formed so as to be wider in the reinforced area (the thicker material) and narrower in the areas that are not reinforced (the thinner material).

However, the combination of Campbell and Appellant's admission would not be sufficient *per se* to render any of the appealed claims obvious. As the Board evidently has recognized: "In order to render a claimed apparatus or method obvious, the prior art must enable one skilled in the art to make and use the apparatus or method." Beckman Instruments Inc. v. LKB Producter AB, 892 F.2d 1547, 1551, 13 USPQ2d 1301, 1304 (Fed. Cir. 1989), citing In re Payne, 606 F.2d 303, 314, 203 USPQ 245, 255 (CCPA 1979).

The Board cites Seufert '916 and concludes that:

one of ordinary skill in the art would have been able to implement one of the well known and predictable techniques mentioned by Seufert '916 to score a fold line in the reinforced carton blank material of Campbell having a first section in the reinforced region that is wider than a second section in the region that is not reinforced, with a transition zone between the first and second sections that gradually widens from the narrower width to the wider width, and would have been prompted to do so while the bond between the tapes and the paper is *not* dry to ensure firm bonding of the tape on both sides to the paper (Finding of Fact 2), in order to form the score lines so as to be wider in the reinforced area (the thicker material) and narrower in the area that is not reinforced (the thinner material). (decision, pp. 10 to 11).

Appellant respectfully disagrees with this conclusion.

Seufert '916 discloses a stiff plastic foil 3, glued to cardboard 1 to form a box blank, in which, prior to gluing, fold lines 13 are formed in the plastic foil, the fold lines 13 having wide portions ("thinned-down areas") 17. Seufert '916 states at col. 2, lines 64 to 67, that the thinned-down areas and fold lines may be produced "by high frequency-/pressure action or by hot stamping." Col. 8, lines 25 to 41 discusses this in more detail:

The application of the thinned-down area 17 can occur simultaneously with the placement of the bend lines 13 in one work process, and indeed with the help of processes for the application of the bend lines. High frequency heating with the simultaneous application of pressure is principally used for this purpose, by means of which particularly pliable soft bend edges are generated. Usable results are, however, also achieved by simultaneous hot stamping of the thinned-down areas 17 and the bend lines 13. Herein, the fabrication of the thinned-down areas as

well as the bend lines 13 occurs appropriately by action on one side of the plastic foil. The application of the bend lines 13 with the high frequency process (DE-PS No. 25 41 324) as well as with the hot stamping process are so well known, that they do not require any further explanation at this time.

Seufert '206 is the U.S. equivalent of the German application DE-PS No. 25 41 324 referred to by Seufert '916, above, as disclosing the "high frequency process." This process, as disclosed by Seufert '206, is used to form a fold line in a thermoplastic sheet (col. 1, lines 6 to 8). In the process, a high frequency generator 25 is used to heat the thermoplastic sheet 22 by dielectric heating (col. 6, lines 5 to 7), while the edge forming tool 20 is forced downward into the plastic (col. 6, lines 19 to 27). The high frequency melts the plastic, and the melted plastic within the sheet moves sideways, forming fold line 30b with bulges 30a on the lower part of the sheet (col. 2, lines 61 to 68; col. 3, lines 53 to 55; col. 6, lines 37 to 43).

In addition to the high frequency process, Seufert '206 discloses at col. 1, line 48 to col. 2, line 6, various prior known methods for producing fold lines or bending thermoplastic sheets, but in each of these, the plastic is also melted.

The problem in attempting to apply the disclosure of Seufert '916, as supplemented by Seufert '206, to the present claims is that the processes disclosed therein form a fold line with wide and narrow portions in plastic. As the Board states at page 10 of its decision:

Seufert '916 evidences that techniques were well known in the art at the time of Appellant's invention for forming fold lines or scores in plastic carton blank material that are wider in a first section and narrower in a second section, with a transition zone between the first and second sections that gradually widens from the narrower width to the wider width (Findings of Fact 5-6). (emphasis added)

Appellant submits that the Seufert disclosures of using the high frequency process or the hot stamping process for forming a fold line with wide and narrow portions in plastic foil would not have suggested to one of ordinary skill in the art the use of such processes for the paperboard used in the Campbell method, nor would they have enabled one of ordinary skill in the art to form the Campbell fold (score) lines with wide and narrow portions.

(i) It Would Not Have Been Obvious to Combine Seufert '916 (Supplemented by Seufert '206) with Campbell and Appellant's Admission

Seufert '916 forms a fold line having wide and narrow portions in thermoplastic material that melts under the application of heat while pressure is applied thereto. Since the paperboard blank and fabric tape employed in the Campbell process do not, of course, melt under the application of heat, there would be no reason to use a process which employs heat to form the Campbell score (fold) lines. To the contrary, one might even speculate that if one were to attempt to use the Seufert high frequency process or hot stamping process to form the fold lines in the Campbell process, the heat might burn or sear the paperboard and/or prematurely set the adhesive, contrary to Campbell's express teaching (*supra*) that the adhesive should not dry until after the scoring is completed.

The rejection of a process as obvious over a combination of references is not sustainable if the prior art does not convey to those of ordinary skill in the art a reasonable expectation of success. In re Vaeck, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442-43 (Fed. Cir. 1991). Here, the characteristics of thermoplastic and paperboard are so different that Seufert '916 and '206 would not have conveyed to one of ordinary skill in the art any expectation that using the methods disclosed therein for forming fold lines in thermoplastic to form fold (score) lines in the Campbell process would be successful.

Appellant therefore submits that it would not have been obvious to one of ordinary skill in the art to take a process specifically designed for use with a material (thermoplastic) that has certain characteristics (melting point, moving when heated) and use it on materials (fabric, fiberboard, paperboard) that do not have those characteristics. Moreover, even if one might assume (which Appellant does not admit) that it might have been obvious to make the tapes used in the Campbell process out of plastic, the Seufert methods of forming a fold line in plastic would still be inapplicable to forming a fold line in the paperboard, or in the combination of the paperboard and tape (as shown in Campbell Fig. 2).¹

¹ It is noted that in Seufert '916, the wide and narrow fold lines 13, 17 are formed in the plastic foil, and the fold line 12 is formed in the cardboard, before the plastic foil and cardboard are glued together.

(ii) Seufert '916 (Supplemented by Seufert '206) Would Not Have Enabled the Formation of Fold Lines with Wide and Narrow Portions in the Campbell Process

As discussed above, Seufert '916, supplemented by Seufert '206, discloses processes for making fold lines in thermoplastic that have wide and narrow portions 17, 13. In these processes, the plastic is heated and melted (Seufert '206, col. 3, lines 53 to 55), and the melted plastic moves sideways under pressure of the forming tool (Seufert '206, col. 2, lines 61 to 68, col. 6, lines 39 to 43). The Board asserts in its decision (page 10) that “one of ordinary skill in the art would have been able to implement one of the well known and predictable techniques mentioned by Seufert '916 to score a fold line in the reinforced carton blank material of Campbell”. However, while the techniques mentioned by Seufert '916 may be well known and predictable for scoring fold lines with wide and narrow portions in plastic, Appellant submits that the processes disclosed by Seufert '916 and '206 would not have enabled one of ordinary skill in the art to form the fold lines 9 in the Campbell process with wide and narrow portions, because Campbell's fold lines are formed in paperboard, and in the combination of paperboard and a reinforcing tape 8 of fabric or the like adhered thereto (Fig. 2). Since paperboard, unlike thermoplastic, does not melt with the application of heat, one of ordinary skill in the art would not have been enabled by Seufert '916 and '206 to implement the processes disclosed therein to form fold lines with wide and narrow portions in Campbell's paperboard carton blank. There is no indication in Seufert '916 and/or '206 that the methods disclosed therein could be used to form fold lines in any materials other than plastic, and, as discussed above, the use of heat when forming a fold line in paperboard would serve no disclosed purpose.

Attention is directed to the fact that Seufert '916 discloses at col. 6, lines 9 and 10 that “groove lines 12 are pressed into the cardboard.” This separate disclosure of forming the fold lines in the cardboard would further tend to indicate that fold lines in cardboard or paperboard should not be formed by the methods used to form the fold lines in plastic. Otherwise, such separate disclosure would be unnecessary, and it would seem that Seufert '916 would have stated that the methods disclosed for forming fold lines in the plastic foil could also be used to form the fold lines in the cardboard, if that were the case.

For the foregoing reasons, Appellant respectfully contends that claims 1 to 4 are patentable over Campbell in view of Appellant's admission and Seufert '916 (supplemented by Seufert '206).

(2) Claims 5 to 7 and 11

Appellant submits that, for the reasons given above, claims 5 to 7 and 11 are likewise patentable over Campbell in view of Appellant's admission, Seufert '916 and Seufert '206.

Moreover, these claims call for scoring the fold line by impressing the paperboard with a multi-point scoring rule. The Board concludes that:

To utilize a multi-point rule having a narrower section to form the narrower section of the bend line and a wider section to form the wider section of the bend line would require merely a predictable variation of the simple single point rule-shaped tool 20 taught by Seufert '206 well within the skill of the art and thus would have been obvious. (decision page 11)

However, Appellant believes that this conclusion can only have been reached by the application of impermissible hindsight based upon Appellant's own disclosure. Although Seufert '916 does state that "the application of the thinned-down area 17 can occur simultaneously with the placement of the bend lines 13 in one work process" (col. 8, lines 25 to 27), and that "[u]sable results are, however, also achieved by simultaneous hot stamping of the thinned-down areas 17 and the bend lines 13" (col. 8, lines 32 to 34), there is no disclosure that the thinned-down areas and the bend lines may be formed by different parts of the same tool, e.g., by a multi-point rule. Seufert '206 does not supply this deficiency, as there is no disclosure therein that tool 20 may be of different thicknesses along its length, nor of how to use such a tool. The examples given by Seufert '206 are of the use of tools having a single thickness (see col. 3, line 66 to col. 4, line 9, and col. 7, lines 12 to 32).

While the use of a multi-point rule to form a score line having wide and narrow portions might seem obvious to the Board in retrospect, the references do not teach or suggest the use of a multi-point rule, nor do they show that a multi-point rule was known in the art at the time of

Appellant's invention. In this regard, the Board's attention is directed to Appellant's disclosure at page 37, line 22 to page 38, line 2 of the specification:

heretofore there have been no known methods of forming a continuous fold line with platen or rotary die cutters that is thicker along one section of its length (the section that is to score a fold line in the thicker ribbon reinforced region of the blank) and thinner along an adjacent section (the section that is to score a fold line in the thinner base-sheet-only region of the blank).

Accordingly, claims 5 to 7 and 11 are also patentable over the applied combination of references for the additional reason that the use of a multi-point rule would not have been obvious therefrom.

(3) Claims 8 to 10 and 12 to 15

These claims call generally for a counter plate beneath the scoring rule, the counter plate having a groove aligned with the scoring rule. The Board cites Haddock as evidence that:

the use of counter plates having slots or channels in cooperation with a rule for forming creases (fold lines) in carton blank material was known in the art at the time of Appellant's invention (decision, page 12)

and concludes that:

a counter plate having a groove shaped as recited in claims 8-10 and 12-15 would have been obvious for use in Campbell's scoring device. (*ibid.*)

Appellant does not agree that in the method of Campbell, as modified in view of Seufert '916 and '206, it would have been obvious to use a counter plate having a groove aligned with the scoring rule. While Seufert '206 does disclose a counter plate ("counter tool") 23, on which may optionally be placed an insulation plate 24 (col. 6, lines 50 to 57), Seufert '206 specifically discloses that:

It is also very important that the counter tool provide a substantially flat surface for the plastic sheets when they are cooling below the softening temperature. This feature is distinguishable from prior art devices wherein the counter tools

have recesses and/or protrusions therein. In such prior art devices, the initially cold soft plastic is forced into these recesses or over the protrusions and is then heated and cooled inside the device thereby producing permanent folds and bends. (col. 4, lines 42 to 50; emphasis added).

In view of this disclosure, it would not have been obvious to one of ordinary skill to proceed contrary to the reference's express teaching and employ a counter plate with a grooved (non-flat) surface.

Nevertheless, it is unnecessary to pursue this question in any detail, because Appellant submits that Haddock does not overcome the deficiencies noted above in the combination of Campbell, Appellant's admission, Seufert '916, and Seufert '206.

Conclusion

In view of the foregoing, Appellant respectfully urges that claims 1 to 15 are not unpatentable over the new grounds of rejection applied by the Board, and requests that the new grounds be withdrawn.

Respectfully submitted,

July 2, 2007



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